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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,115	09/19/2003	LeNoir E. Zaiser	2173.2004-001	8421
59242 7590 01/10/2011 R.D. JOHNSON & ASSOCIATES, P.C. 20 PICKERING STREET P.O.BOX 920353 NEEDHAM, MA 02492				
EXAMINER				
SCHNEIDER, CRAIG M				
ART UNIT		PAPER NUMBER		
3753				
NOTIFICATION DATE		DELIVERY MODE		
01/10/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INBOX@JOHNSONIP LAW.COM

Office Action Summary

Application No.

10/666,115

Applicant(s)

ZAISER ET AL.

Examiner

CRAIG M. SCHNEIDER

Art Unit

3753

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,7-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4,5,7-18,24,25 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/16/10 has been entered.

Election/Restrictions

2. Applicant's election without traverse of Group I in the reply filed on 5/28/08 is acknowledged.
3. Claims 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/28/08.
4. Claims 24-26 and 30 were previously restricted on 3/21/06. The examiner is rejoining claims 24, 25, and 30 because the apparatus claims of claims 7, 12, and 27 are not distinguishable from the method claims.
5. The claims that will be examined in the office action are 2, 4, 5, 7-18, 24, 25, and 27-30.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2, 7, 10-13, 17, 18, 24, 25, and 27-30 are rejected as understood under 35 U.S.C. 102(b) as being anticipated by Chaney (3,285,261).

Chaney discloses a pneumatic differential pressure valve to supply a quantity of a medium in response to an inhalation breath comprising a nozzle (27) in communication with a pressurized supply (25) of a medium and having a head (26) for delivering the pressurized supply of the medium to a delivery outlet(5); a control chamber (20') capable of being pressurized and then depressurized in response to an inhalation breath; and a diaphragm (19) disposed between the nozzle head and the delivery outlet and controlled by pressure in the control chamber, wherein the diaphragm pneumatically seals the nozzle head when the control chamber is pressurized and pneumatically releases from the nozzle head in response to a reduction in pressure in the control chamber, and wherein the surface area of the nozzle head in contact with the diaphragm is computed so that the diaphragm pneumatically releases from the nozzle head in response to the inhalation breath without mechanical assistance (col. 2, line 3 to col. 3, line 62).

Regarding claims 2 and 10, the surface area of the nozzle head is at least 17% of the surface area of the diaphragm in contact with the control chamber as can be seen in Figure 2.

Regarding claim 11, the control chamber of Chaney is capable of being pressurized to at least about 22 psi.

Regarding claim 12, the gas reservoir for the supply gas is attached to the threaded section 25. The timing gas chamber is the control chamber (20').

Regarding claim 27, the pilot valve (35) operates in response to an inhalation breath.

Regarding claims 24, 25, and 30; the method claims are anticipated by the apparatus of Chaney.

Regarding claims 17, 18, 28, and 29; per Figure 2 in Chaney the ratio of the opposing pneumatic forces would be less than 1:2.4 and further would be less than 1:2.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 4, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. (4,363,424).

Chaney discloses a filter (17) located in the oxygen channel that leads to the nozzle/diaphragm interface as can be seen in Figure 2. Chaney fails to disclose that the filter is located at the interface of the nozzle and diaphragm. Holben et al. disclose a filter (162) located in a nozzle section (152) that interfaces with the valve structure (98)(col. 9, line37 to col. 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the location of the filter as disclosed by Chaney to be at an interface of the nozzle and the valve as disclosed by Holben et al., since the changing of the location of the filter would not alter the function of the device.

10. Claims 5, 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. as applied to claim 4 above, and further in view of Danon (5,348,001).

Chaney in combination with Holben et al. disclose all the features of the invention except that the filter has a porosity of 20 micrometers and is made of sintered bronze. Danon disclose utilizing a filter (12) that has a porosity of 20 microns (col. 5, lines 9-11) and is made of sintered bronze (col. 4, line 66 to col. 5, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a 20 micron filter as disclosed by Danon in place of the filter of the combined device of Chaney and Holben et al., in order to filter the air to 20 microns.

Regarding claim 16, it would have been obvious to one of ordinary skill in the art to utilize sintered bronze material as disclosed by Danon with the filter of the combined device of Chaney and Holben et al., in order to utilize a commonly available filter material.

Response to Arguments

11. Applicant's arguments filed 9/16/10 have been fully considered but they are not persuasive. The applicant is alleging that the examiner has erred in applying the Chaney reference to reject the independent claims because the indicated diaphragm of Chaney (19) is not a diaphragm. The examiner disagrees and as an example would like to direct the applicant to Shamlian et al. (4,219,017) which disclose a diaphragm valve (96)(col. 5, line 52 to col. 6, line 5). This diaphragm is the same type of valve member

as disclosed by Chaney and therefore the Chaney diaphragm as identified above is considered to be a diaphragm in the art.

12. The applicant is arguing that the diaphragm of Chaney does not pneumatically seal the nozzle head when the control chamber is pressurized. The examiner disagrees and asserts that as the pressure increases in chamber 20' the diaphragm 19 pneumatically seals the nozzle head 26 from allowing air to proceed to outlet 5 and conversely when the pressure decreases in chamber 20' the diaphragm 19 will allow air to proceed to the outlet 5 as disclosed by Chaney (col. 3, lines 22-43). The orifice 30 does not prevent the valve from performing the claim limitations of sealing the nozzle head, since the chamber is still being pressurized and seals the nozzle head from allowing air to proceed to the outlet.

13. The applicant is further arguing that the Holben et al. reference fails to disclose that the filter is positioned at the interface of a delivery nozzle and diaphragm as required per the claim language. Chaney discloses the use of a filter in the pathway but does not disclose the filter being located at the interface of the nozzle and diaphragm. Holben et al. disclose the use of a filter at the interface of a nozzle and a valve element therefore per the teaching of Holben et al., the filter element of Chaney is being relocated to the interface of the nozzle and the diaphragm as stated above.

14. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571) 272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Craig M Schneider/
Examiner, Art Unit 3753
January 5, 2011